

associated with a destination; accessing sensor information from a plurality of sensors, wherein the sensor information comprises a location of the vehicle and images from image sensors positioned about the vehicle; and determining that the zoom level is to be adjusted based on the sensor information, wherein the combined view is updated to be associated with the adjusted zoom level.

**[0188]** The above embodiments may include one or more of the following. For the combined view, the autonomous visualization comprises: a graphical depiction of the vehicle, and a graphical representation of a real-world environment proximate to the vehicle, the graphical representation being generated based on the images from the image sensors, the map information comprises: a graphical representation of a portion of a map associated with the area of the real-world environment, and the navigation information comprises: one or more graphical representations of driving events which are associated with the area of the real-world environment. The graphical representation of the real-world environment depicts one or more lanes associated with a road on which the vehicle is driving, and wherein the graphical depiction of the vehicle is depicted in a particular lane of the one or more lanes. The particular lane is identified based on the images from the image sensors. Determining that the zoom level is to be adjusted based on the sensor information comprises: identifying, based on the navigation information, a particular number of driving events which are within a threshold distance or driving time of the location of the vehicle, wherein the determination is based on the particular number of driving events. Determining that the zoom is level is to be adjusted is based on one or more complexity measures associated with the particular number of driving events. Determining that the zoom is level is to be adjusted is based on the particular number of driving events exceeding a threshold. Determining that the zoom level is to be adjusted based on the sensor information comprises: identifying, based on the sensor information and navigation information, that an upcoming driving event is to be skipped, such that a route to the destination is updated; and adjusting the zoom level, wherein the combined view includes a graphical representation of the updated route. Identifying that the upcoming driving event is to be skipped is based on images from the image sensor, wherein the images are analyzed to identify a hazard associated with the upcoming driving event. Determining that the zoom level is to be adjusted based on the sensor information comprises: identifying, based on the sensor information and navigation information, that an upcoming driving event is of a particular type which is associated with adjusting the zoom level; and adjusting the zoom level, wherein the combined view includes a graphical representation of one or more driving events associated with the adjusted zoom level. The particular type comprises exiting a highway onto a surface road. The combined view is updated to depict a route associated with the adjusted zoom level.

**[0189]** Example embodiments may include methods, systems, and non-transitory computer storage media. An example method implemented by a system of one or more processors, the system in communication with one or more sensors positioned inside of a vehicle, comprises identifying presence of a passenger inside of the vehicle; determining, based on sensor information from the sensors, a portion of the passenger to be tracked; and controlling operation of vehicle functionality based on tracking of the portion of the

passenger, wherein vehicle functionality comprises air conditioning control, mirror control and/or steering wheel positioning.

**[0190]** The above embodiments may include one or more of the following. Identifying the presence of the passenger is based on one or more images obtained from an image sensor facing within the vehicle. Identifying the presence of the passenger is based on a pressure sensor included in a seat of the vehicle. Identifying the presence of the passenger is based on detection of a user device used by the passenger, wherein the system is in wireless communication with the user device. Identifying the presence of the passenger is based on interruption of infrared emitters directed to a seat. Operations further comprise storing information usable to recognize the passenger, wherein the information is based on one or more images of a face of the passenger. The information comprises an encoded vector with respect to a learned vector space, the encoded vector being generated via a machine learning model. Operations further comprise generating a profile associated with the passenger, wherein the profile is associated with the information usable to recognize the passenger, and wherein the profile indicates preferences of the passenger with respect to operation of the vehicle functionality. Determining a portion of the passenger to be tracked is based on one or more images of the passenger from an image sensor facing within the vehicle. Controlling operation of the vehicle functionality comprises: adjusting a heating, ventilation, and air conditioning (HVAC) system, such that an output of air maintains direction to the portion of the passenger. Controlling operation of the vehicle functionality comprises: adjusting one or more mirrors based on the portion of the passenger, wherein the portion comprises eyes of the passenger. Operations further comprise the method further comprising causing output, via a display of the vehicle, of a user interface, wherein the user interface presents a recommendation indicating that the passenger adjust a position of the passenger's head.

**[0191]** It is to be understood that not necessarily all objects or advantages may be achieved in accordance with any particular embodiment described herein. Thus, for example, those skilled in the art will recognize that certain embodiments may be configured to operate in a manner that achieves or optimizes one advantage or group of advantages as taught herein without necessarily achieving other objects or advantages as may be taught or suggested herein.

**[0192]** All of the processes described herein may be embodied in, and fully automated via, software code modules executed by a computing system that includes one or more general purpose computers or processors. The code modules may be stored in any type of non-transitory computer-readable medium or other computer storage device. Some or all the methods may alternatively be embodied in specialized computer hardware. In addition, the components referred to herein may be implemented in hardware, software, firmware or a combination thereof.

**[0193]** Many other variations than those described herein will be apparent from this disclosure. For example, depending on the embodiment, certain acts, events, or functions of any of the algorithms described herein can be performed in a different sequence, can be added, merged, or left out altogether (e.g., not all described acts or events are necessary for the practice of the algorithms). Moreover, in certain embodiments, acts or events can be performed concurrently, e.g., through multi-threaded processing, interrupt process-